

Replacement Paragraph in Clean Form

The present invention is directed to airbag fabrics that are formed of a substrate of high tenacity yarn such as nylon, polyester, polypropylene or the like with an extrusion coating of a thermoplastic material. Because of the extrusion coating, these fabrics may be made of lower denier yarns with a less dense weave. For example, high tenacity yarns formed of deniers in the range of 210 to 660 may be woven with warp and fill densities of 30 to 70 ends per inch. For example, a 420 denier fabric, when coated according to the present invention, will result in fabrics having a tear strength to weight ratio of about 10# per oz per yd². As a more specific example, a 4.4 oz/yd² fabric made of 210 denier yarns and coated according to the present invention should achieve a tear strength of almost 40#. High tenacity yarns, i.e., those with a tenacity greater than 5 grams/denier, along with the extrusion coating, permit the resulting fabric to exhibit a high strength to weight ratio. This is extremely important in fabrics used in air bags and the like. When provided with an extruded thermoplastic coating, compatible to the fabric material, these lighter weight fabrics become lightweight and air impermeable. By properly selecting the yarn and coating, the fabric can be recyclable. Air impermeability is defined as less than 0.3 cfm/ft² at 0.5 in water pressure (125 Pascals).